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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,206	03/23/2004	Takeshi Takahashi	119201	1908

25944 7590 10/28/2008

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EXAMINER	
HODGE, ROBERT W	

ART UNIT	PAPER NUMBER
1795	

MAIL DATE	DELIVERY MODE
10/28/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/806,206	TAKAHASHI ET AL.	
	Examiner	Art Unit	
	ROBERT HODGE	1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 September 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2 and 17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2 and 17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/4/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/4/08 has been entered.

Response to Arguments

Applicant's arguments filed 8/7/08 have been fully considered but they are not persuasive. Applicants state that Gao cannot anticipate or obviate the instantly claimed invention because Gao does not use the same method as the instantly claimed invention. First and foremost applicants' arguments are not commensurate with the scope of the instant claims, applicants are claiming a product, not a process of making said product and therefore it is not necessary for the prior art to disclose any method steps of making said product. Furthermore a quick search of the Gao reference does reveal that Gao is in fact using "precipitation" in paragraph [0031], and therefore it is even more clear that the Gao reference does in fact inherently have the same existence ratios as the instantly claimed invention and furthermore that a skilled artisan would be motivated to optimize the result effective variable (i.e. existence ratios) as already set forth in the previous Final Office Action. Gao further teaches "intimately mixing" the

materials in the product which is further evidence that Gao is providing uniformity of the active material layer which would also inherently provide the same existence ratios of the instantly claimed invention. Applicants direct the Examiner to Table 5 of the instant specification for supposed unexpected results over the prior art invention of Gao. However Table 5 is only a comparison of the various examples of the instant invention and does not compare the closest prior art, which currently is Gao, to the instant invention. Therefore applicants have not met there burden of proof to show that the instant invention is either materially different than the prior art or that there are unexpected results over the prior art and the previous rejections will be maintained.

Claim Rejections - 35 USC § 102/103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 2 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. Pre-Grant Publication No. 2003/0035999 hereinafter Gao.

Gao teaches a positive electrode active material for a nonaqueous electrolyte secondary battery comprising a lithium-transition metal composite oxide containing Zirconium of a layer structure such as Li_2ZrO_3 (lithium zirconate), said active material layer being doped with Magnesium to provide overcharge protection (abstract, paragraphs [0005]-[0007], [0010], [0018]-[0020], [0031], [0036]-[0038] and claims 3 and 38). Because Gao teaches a precipitation reaction (which is the same process that

applicants use for the instant invention) during the process of forming the active material as well as intimately mixing the active material it is inherent that the existence ratio of zirconium (in the form of lithium zirconate) and magnesium will respectively be present on the surface at 20% or more and the burden is shifted to applicants to prove in the form of evidence comparing Gao's invention with the instant invention otherwise, see MPEP 2112.

In the alternative it would have been obvious to one having ordinary skill in the art to form the positive active material of Gao such that the "existence ratio" of zirconium and magnesium respectively on the surface of the lithium-transition metal oxide is greater than 20% (i.e. uniformly forming the surface element (Gao paragraph [0031])) in order to reduce the friction force among the active materials thereby increasing the flowability of the active material so that the positive electrode film has a higher density thus increasing the charge/discharge characteristics of the battery and also increasing the capacity of the battery. It further would have been obvious to optimize the "existence ratio" of zirconium and magnesium respectively on the surface of the lithium-transition metal oxide of Gao since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art, in the absence of unexpected results. In re Boesch, 617 E.2d 272, 205 USPQ 215 (CCPA 1980). Therefore the burden is shifted to applicants to prove in the form of evidence that the invention of Gao does not exhibit the same existence ratios as the instantly claimed invention.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gao in view of U.S. Pre-Grant Publication No. 2002/0127473 hereinafter Ooya.

Gao further teaches that the positive active material further comprises a conductive agent and a non-aqueous electrolyte secondary battery comprising a positive electrode employing the positive active material, a negative electrode comprising a lithium metal or lithium alloy and a separator between the positive and negative electrodes.

Gao does not teach that the surface element exists between the positive active material and the conductive agent or that the positive active material is layered onto a positive electrode current collector or winding the electrodes and separator.

Ooya teaches a wound nonaqueous electrolyte secondary battery comprising a positive electrode current collector having on at least one side a positive active material comprising a layer of a lithium-transition metal composite oxide such as lithium nickel cobaltate, a surface element that is at least zirconium that exists between the positive active material and a conductive agent, a separator located between the positive electrode and a negative electrode, said negative electrode comprising a current collector having a layer of at least a lithium metal, a lithium alloy, a carbon material capable of intercalating and deintercalating lithium ions or a compound capable of intercalating and deintercalating lithium ions and the electrodes and separator are

layered against one another (see paragraphs [0017]-[0034], [0055]-[0059], [0062]-[0070] and [0084] and table 1).

At the time of the invention it would have been obvious to one having ordinary skill in the art to modify Gao such that the surface agent exists between the positive active material and the conducive agent, layering the positive active material onto a positive electrode current collector and winding the electrodes and separator as taught by Ooya in order to provide a nonaqueous electrolyte secondary battery that will have increased packing density and improved discharge rate characteristics of the battery by lowering an impedance of the positive electrode.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT HODGE whose telephone number is (571)272-2097. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert Hodge/
Examiner, Art Unit 1795